DOCUMENT RESUME

ED 158 894 PS 010 093

TITLE Problems of Children of School Age (5-9 Years): Report on a Working Group.
INSTITUTION World Health Organization, Copenhagen (Denmark). Regional Office for Europe.
PUB DATE 76
NOTE 49p.; Type size is small throughout

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Accidents; *Children; Conference Reports; *Emotional Problems; Environmental Influences; Health Education; Health Services; *Nutrition; *Planning; Program Planning; Risk; Slow Learners; *Social Problems; Social Services; *Special Health Problems; Urbanization
IDENTIFIERS World Health Organization

ABSTRACT

This report presents the proceedings of a working group convened in Copenhagen in November 1975 by the World Health Organization to discuss the problems of children 5 to 9 years. The report focuses on a survey of the general problems of European children of this particular age, individual risk factors, and individual groups at risk, and suggests possible solutions to these problems. A review of the characteristics of children aged 5 to 9 considers relevant geographical population statistics, physical health and development, cognitive development, psychosocial development, and the growing involvement of the 5- to 9-year-old in the community outside home and school. A discussion of the problems of 5- to 9-year-olds comprises the largest section of the report. General problems which arise as a result of technological advances in society, urbanization, changing family structure, family migration within and between countries, unemployment, and other socioeconomic changes are briefly touched upon. Individual risk factors such as nutritional problems, infectious diseases, accidents, chronic diseases, and slow learning problems are described in detail. Environmental risk factors such as stress resulting from initial entry into school, urbanization, and non-optimal social and economic conditions are also discussed. Potential solutions are discussed in detail and recommendations based on the report are summarized. (CM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED158894

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Problems of Children of School Age (5-9 Years)

Report on a Working Group

Copenhagen
24-28 November 1975

PS010093

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
A. Ezban
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Not for Sale
Distributed by the
REGIONAL OFFICE FOR EUROPE
World Health Organization
COPENHAGEN
1976

ICP/MCH 004

Note

This report has been prepared by the Regional Office for Europe of the World Health Organization for governments of Member States in the Region and for those who participated in the Working Group on Problems of Children of School Age I (5-9 years). A limited number of copies are available to persons officially or professionally concerned in this field of study from the WHO Regional Office for Europe, Scherfigsvej 8, 2100 Copenhagen Ø, Denmark.

The views expressed are those of the participants in the Working Group and do not necessarily represent the decisions or the stated policy of the World Health Organization.

The designations employed and the presentation of the material in this report do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Where the designation "country or area" appears in the heading of tables, it covers countries, territories, cities or areas.

This report is also available in French and Russian.

CONTENTS

		Page
1.	Introduction	1
	1.1 Opening session	1
	1.2 Scope and purpose	2
2.	Characteristics of the age-group	3
3.	Problems of the age-group	6
	3.1 General	6
	3.2 Individual risk factors	7
	3.3 Environmental risk factors	21
4.	Solutions	30
	4.1 Present-day solutions	30
	4.2 Changing the solutions	32
	4.3 Surveillance	34
	4.4 Health education as a solution	37
	4.5 Future solutions	39
5.	Conclusions and recommendations	40
ANNEX I	Programme	42
ANNEX II	List of participants	44

1. INTRODUCTION

1.1 Opening Session

A Working Group on Problems of Children of School Age I (5-9 years) was convened in Copenhagen from 24 to 28 November 1975 by the WHO Regional Office for Europe. The meeting was attended by 13 temporary advisers, from Denmark, Federal Republic of Germany, France, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, USSR and the United Kingdom, together with one consultant, five staff members of the Regional Office, and one representative from WHO headquarters.

Dr V. Tatočenko was elected Chairman, Dr G. Congy was elected Vice-Chairman and Dr M. Wagner acted as Rapporteur.

Opening the meeting on behalf of the Regional Director, Dr F. Bauhofer (Director of Health Services) pointed out the gap between health needs and health services available for children of school age in Europe. He stressed the importance of the family for the psychological development of the child and the physical and mental impact which rapid changes in society, urbanization, migration and the prevalence of working mothers were having on children in younger school age-groups. In relation to this, he welcomed the recent shift towards viewing the child more in the context of the whole family, where its whole psychological and physical environment was taken more into account.

He reminded the participants of the scale and importance of international cooperation in relation to children, saying that the Regional Office had so far conducted more than 40 activities covering almost the whole range of child health problems. He noted the systematic programme of maternal and child health care being developed in accordance with WHO's Sixth General Programme of Work and reminded participants that the guiding principles for maternal and child health activities conducted by the Region remained the family perspective, emphasis on prevention and continuity of care.

Dr P.S. Rönisch, WHO Regional Officer for Maternal and Child Health, also addressed the opening session of the meeting. He, too, referred to the great need for international cooperation throughout the whole range of maternal and child health services.

Dr Rönisch pointed out that the WHO Constitution enshrined the statement "The healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development." He noted that child health had long been treated in the Region in the context of the family, but that it was essential to take growing account of different psychosocial parameters.

Describing the various meetings planned for the maternal and child health field he restated the ideal goals of family health, mentioning in

particular the establishment of optimal conditions to protect the family from all negative influences arising from poor health or social conditions.

1.2 Scope and purpose

Within the framework of its maternal and child health programme, the Regional Office for Europe of WHO is convening a series of three working groups to deal separately with the problems of children of each of the school age-groups: 5-9 years; 10-14 years; and 14-18 years. The need for three separate working groups to cover respectively the early school period, the problems of pre-puberty age-groups, and the period of adaptation to society, arises because of the special and contrasting characteristics of the three periods. The three working groups should provide the basis for a better understanding of the child and adolescent in society which will be the subject of a conference in 1978.

Another recent working group[1] and a conference[2] convened by the WHO Regional Office, both recommended the new triple emphasis on a family perspective, prevention, and continuity of care. While maternal and child health care traditionally dealt primarily with the periods of gestation, infancy and preschool, a family perspective and continuity of care demand that the period be extended to cover school age, adolescence and the early years of adulthood.

The proper scope of the Working Group was the subject of some discussion by the participants. While the Group recognized that there are wide differences between and within countries, to obtain a balanced view, all areas of the Region need to be taken into account because every country has children disadvantaged in one way or another. There was also agreement that the meeting should consider all problems of the children in the age-group under review - health, educational and social - and all services - health (in and out of school), educational, social and psychological - provided for them. Such a broad scope naturally limited the detail with which any one problem or service could be discussed but this was consistent with the Working Group's purpose of obtaining an overview by identifying the problems and identifying overlaps, gaps, and deficiencies in services. It was felt that later meetings could focus in depth on specific problems or services.

---

[1] World Health Organization, Regional Office for Europe (1974) Evaluation of MCH services in certain countries of the European Region, Report on a Working Group, Copenhagen, 25-28 September 1973, Copenhagen

[2] World Health Organization, Regional Office for Europe (1975) New trends in maternal and child health, Report on a Conference, Moscow, 11-15 November 1974, Copenhagen

Broadly speaking, there are two approaches to a consideration of the problems involved. Using the vertical approach, each risk factor is considered separately, first defining the problem and then seeking solutions. The second approach is a horizontal one, whereby all problems at a single level (for example, in the community) are identified and all solutions at this level are sought. Each approach has its advantages and disadvantages and the meeting was organized so as to obtain a synthesis of both.

Following a review of the characteristics of children in the age-group under review, a horizontal survey of the general problems of these children was undertaken. This was followed by a vertical look at individual risk factors and individual groups at risk, in each case discussing first the problems and then possible solutions. Finally, a horizontal overview of solutions (services) was conducted, which permitted the emergence of such common principles in a given area as solutions at the school level, possibly including new service roles for school health personnel, for use in relation to all risk factors.

2. CHARACTERISTICS OF THE AGE-GROUP

Frequently during the sessions the pertinent characteristics of children 5-9 years of age had to be defined, as they were relevant to the problems and/or solutions under discussion.

The number of children in this age-group in Europe is shown in table 1 (the European Region is not coextensive with Europe itself but general size and trends agree with it). In the 15 years from 1965 to 1980 there will be a total world increase of 30% in the numbers of children 5-14 years of age. This increase will be the result of increases in the developing world, not the more developed world. The European Region reflects this for, as can be seen in table 1, southern Europe shows a substantial increase in children aged from five to nine years, and western and northern Europe show a slight increase. Eastern Europe and the USSR, on the other hand, show a slight decrease in the number of children in this age-group. This is not connected with fertility but reflects a distortion in the population age structure indirectly caused by the heavy loss of life in eastern Europe during the Second World War. These differences are the result of changes in the birth-rate in the different areas.

The mortality for children of school age (5-14 years) shows a converging trend towards a threshold at around 40 deaths a year per 100 000. In countries where the death rate is still significantly higher, such as in southern Europe, there has been a rapid fall in recent years, accounted for by the decrease in infectious diseases. In countries where the rate has already reached this threshold, such as in northern Europe, there has

Table 1

POPULATION PROJECTIONS (1965-1980)
FOR THE AGE-GROUP 5-9 YEARS
BY GEOGRAPHICAL REGIONS

(Figures given in thousands)

	World	Europe	Western Europe	Southern Europe	Eastern Europe	Northern Europe	USSR
1965	407 593	37 620	11 415	10 9[illegible]	9 166	6 062	24 331
1970	434 820	38 486	12 341	11 435	8 025	6 686	23 263
1975	486 695	39 512	12 460	11 740	8 539	6 773	20 443
1980	540 745	41 034	12 692	12 126	8 966	7 251	22 22[illegible]

Source: World Health Organization (1975) World Health Statistics Report, 28, No. 4

been no further decrease, since the major residual causes of mortality, tumours and violent deaths, remain at the same levels in all countries. In several European countries there has even been a slight tendency for the mortality rate to rise as a result of the increases in the number of violent deaths.

This mortality rate of around 40 per 100 000 is the lowest of any period in life and perhaps partly as a result the age-group has tended in the past to receive low priority. The focus of attention (and services) has been rather on the more rapid developmental period of the infant and very young child and on the more turbulent adolescent period. The lack of attention to young children of school age may have also sprung from the assumption that since children were now at school, the school was looking after them. One of the results of this low priority is that we now have little information on the morbidity of children from five to nine years of age.

Thus, the physical health and development of children aged 5-9 years is characterized by low mortality and unknown morbidity. These children are becoming more mobile in their own, self-defined neighbourhood as they satisfy a need to explore their own expanding environment. This exploratory behaviour is characterized by risk-taking as they learn to test the limits of their physical development. Recreational needs expand and sports, whether organized formally or informally, are of increasing importance for them.

The cognitive development of children aged from five to nine years is characterized by an open-minded eagerness to learn. They learn best through direct experience and are greatly influenced by the models of adults, their elders and their peers. Health is not of importance to them and cannot be used as an incentive for learning or behaviour. They have not yet learned orthodox explanations for things nor the traditional societal acceptances and therefore they maintain a naivety which allows their thinking to cross borders freely producing fresh, creative ideas and a minimum of prejudice. In the more developed countries the children are watching increasing amounts of television, but the effect of this surrogate experience is as yet unknown. Exceptional cognitive development in either direction is usually first identified during this age, as a result of school performance.

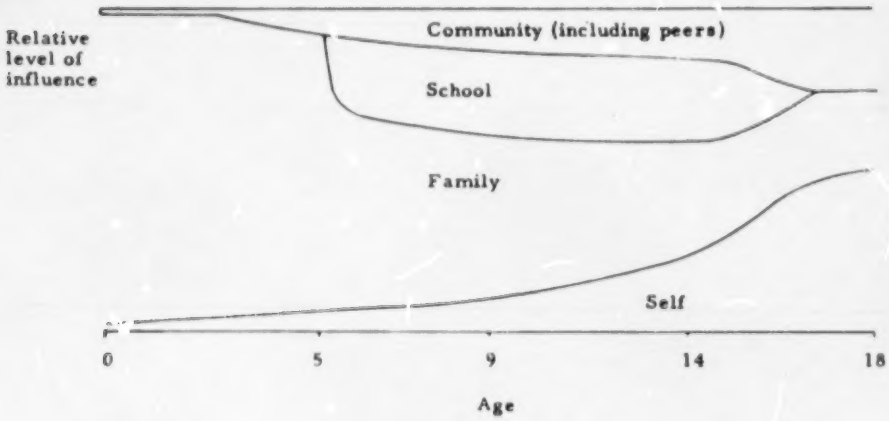
The psychosocial development of children in the five-to-nine age-group is characterized by rather abrupt and profound changes. These changes are shown in fig. 1. This figure is, of necessity, highly diagramatic since the influence of social factors on development varies considerably according to culture, family and individual. Nevertheless, certain general features apply to the vast majority of such children in the European Region. Thus, for example, as can be seen in the figure, the five-to-nine-year-old child is still quite dependent on parents and remains closely integrated in the family unit, while what affects the family in turn affects the child. So the marked increase in mobility of families in the European Region, from rural areas to urban areas, and from one country to another, affects the child, as does increasing family instability caused by factors such as unemployment (see section 3.3.2 and 3.3.3).

The figure also shows how the beginning of formal schooling is an abrupt and profound change for the child. The start of school life is an important transition for the child (see section 3.3.1). If the child has been to any preschool group at all, the dominant feature there would have been normal child care and feeding. Suddenly, however, the child is faced with formal, fixed, societal demands - for example, learning to read; and suddenly he is obliged to meet these demands, since society has an investment in educating the child to contribute to society. School performance includes not only cognitive achievement but also social-behavioural requirements; the latter often leads to the first recognition of unusual social or psychological development. Once in school, the child spends a significant and increasing portion of the day there and so many of the child's physical and social as well as cognitive needs (nutritional, recreational, etc.) must at least in part be met at school. School attendance also brings other factors into play, including such hazards as increased exposure to infectious agents and to traffic going to and from school.

Fig. 1 also illustrates the growing involvement of the five-to-nine-year-old child in the community outside home and school. This means that society is beginning to have a full impact on the child; past mistakes and present inequities in society are beginning to influence the child. There is, then, a new triad surrounding the child (family, school, and community) and each of the three elements must be included in considering the problems of these children and solutions to them.

Fig. 1

INFLUENCE OF SOCIAL FACTORS ON DEVELOPMENT[1]



[1] This figure is diagramatic, and should not be considered as being quantitative.

In addition to illustrating the continuing importance of the family, the new influence of the school and the growing influence of the community, fig. 1 also illustrates another changing influence on this age-group, the growing influence of the child on himself and his growing self-reliance. In the past, family and society conventions were such that children of this age-group were repressed, and were to be seen and not heard. There is an increasing recognition today that children of this age-group are old enough to begin to enter into planning and decision-making for themselves, for those around them and for their immediate environment.

3. PROBLEMS OF THE AGE-GROUP

3.1 General

Recent biological and technological advances have had two effects on the problems of young schoolchildren. First, the improvement of the general socioeconomic level in the Region, improved environmental health

(water, sanitation, etc.) and advances in medicine, in that order, have decreased or eliminated some of the old problems such as infectious diseases. At the same time, the technicological advances have created new problems for them. The classical medical model is often less applicable to the new problems, many of which may to some extent reflect the growth (more is better) principle of modern industrial society: overnutrition (obesity); over-medication; overhousing (high-rise and social isolation); overeducation (every child must be a proficient reader, which leads to the label of educationally sub-normal for those who read poorly).

Changes in society in recent times have also produced or contributed to the emergence of these new problems. Family migration within and between countries, urbanization, changing family structure, increasing educational demands on society, unemployment and other unresolved social and economic problems have all affected the way the new problems are evolving.

The morbidity and other characteristics of the new problems are, to a great extent, unknown although it is clear there is a shift away from acute physical disease and towards psychosocial problems and chronic diseases. In distribution and severity they vary according to economic, social, cultural, historical, psychological and industrial factors, and any evaluation must include consideration of all of them. Thus, for example, when considering any individual problems, it is essential to evaluate the shared responsibilities for the problem and its solution among the four elements involved: the child, the family, the school and the community.

The Working Group discussed and evaluated a number of the new problems for children in this age-group. While time did not permit the meeting to be exhaustive in surveying every possible new problem, the questions considered were of sufficient number and variety to generate general principles with regard to problem evaluation and possible solutions to them. The new problems fall into two major (although not mutually exclusive) categories: individual risk factors covering conditions in the child which increase the risk of sub-optimal development; and environmental risk factors consisting of conditions surrounding the child which increase the risk for sub-optimal development.

3.2 Individual risk factors

3.2.1 Nutrition

Very little is known about the level of nutrition, nutritional risk groups and nutritional problems among children aged from five to nine years in the European Region. Because food and eating are so strongly influenced by such social and psychological factors as social and religious customs, personal habits and child rearing patterns, the field of nutrition is filled with inconsistencies, misunderstandings, and, in some cases, myths and nonsense. The confusion is further aggravated by the fact that scientific data on nutrition, especially in childhood, is sparse. Most nutritional scientific work has focused on the more severe forms of

malnutrition found in the developing countries. The tendency to apply such specialized data to the more developed countries has, in many cases, been misleading.

A few nutritional surveys have been conducted on children in the more developed countries and have given some pertinent general results. The first result is that, even with modern technology, the nutrition status of young children is not easily determined. Dietary history is notoriously difficult to obtain and analyse. Clinical physical examination is unproductive except when malnutrition is already far advanced. Height and weight do not correlate with nutritional state except in cases of severe malnutrition; the evidence suggests that small children eat less, not that children who eat less are small.

Nutrition research suggests that nutritional risks exist in the more developed areas of the European Region as well as in marginally developed areas. Nutritional risk is associated with such factors as economic level, social status, historical factors, cultural factors, emotional factors, industrial factors and geography. As a consequence, the characteristics of groups of young schoolchildren who are nutritionally at high risk vary from country to country and within countries. Each country must therefore study its own nutritional risk groups in order to determine which factors are relevant.

Studies suggest that although low socioeconomic status correlates with smaller dietary intake, not all children from poor homes are at high nutritional risk. Close scrutiny of data is important here as a guard against prevalent misconceptions. Income per se correlates much less than socioeconomic status with levels of nutrition. Income is an important factor, limiting healthy diet only among families who are extremely poor. Life styles, food customs, etc. are much more important among most of those who are poor. Money provides the opportunity to eat well but more important is how this is translated into budgeting for food purchasing and into food preparation and eating practices. The available evidence in fact suggests that poor people eat less, but the nutritional quality of the food consumed is often either as good or better than that consumed by the more well-to-do. In addition to children from very poor areas, other groups of young schoolchildren must be considered as being at high risk nutritionally. This includes children of school age not attending school, and children from migrant or itinerant families.

Modern technology and recent social change have created three new problem areas in the nutrition of young schoolchildren in the European Region: overnutrition, convenience foods and collective feeding.

Overnutrition and obesity have been found to be more prevalent than undernutrition in many groups of young schoolchildren. The patterns of overnutrition have been found to often develop in early childhood and may be quite resistant to change by the time adolescence is reached. The idea that if a little is good, a lot must be better, is one of the precursors of not only obesity but also of other problems of overnutrition such as hypervitaminosis.

Surveys have substantiated the phenomenon of increasing consumption of processed food as well as "convenience foods" (pre-cooked, premixed, etc.) among young children. The quality of these foods varies considerably and to date there have been few attempts to control the quality of processed and convenience foods.

Collective feeding is another increasing nutritional phenomenon among young schoolchildren. While in earlier times it was most common for children to bring their school-lunch from home, in many European countries a collective food service is now provided by the school. Although in many cases this food service is under the direction of competent nutritionists who provide hygienic, balanced meals, too often the relationship of this meal to the rest of the food consumed by the child that day is not considered and there is no involvement of the child, teachers, family or community in the selection and preparation of school lunches. The Working Group considered such involvement essential.

The Working Group also considered various solutions to nutrition problems under discussion. The first solution recommended was to gather more information on the nutritional status and nutritional risk for children in the five-to-nine age-group. Such studies must be specific to a given area (or country), they should not rely only on traditional medical tools such as physical examination, but could include the grouping of nutritional risks under headings ranging from undernutrition to overnutrition. Information from such studies could then form a rational basis for nutrition programmes and nutrition education in the given area.

With regard to collective feeding programmes in the school, there was unanimous agreement that there needs to be greater involvement of the family and community in the food selection and preparation. These food programmes at school should be an educational experience involving schoolchildren, their parents, and their teachers.

The Working Group agreed that nutrition education programmes for the children and their parents should be updated with regard to both information and the methods used. New emphasis based on current local conditions should include such areas as prevention of obesity, the wise selection of convenience foods, identification of protein sources cheaper than meat, etc. As regards educational methods, the Working Group stressed the importance of a team effort. Children could "learn by doing" through active involvement in the planning of food programmes, preparation of food, and discussions about meals. Teachers could teach nutritional principles not only in the classroom but also at mealtimes. School health personnel could serve as nutrition consultants. Parents may help to plan food programmes at school and help in food preparation. Community members could work together with children and parents in promoting the improvement of the sources and types of food available in their community. For the success of such integrated, cooperative nutrition programmes, all members of the team (not just the children) need improved education in nutrition.

These solutions involve new roles and new responsibilities for school health personnel. School physicians and school nurses should be trained as child nutrition specialists with expert knowledge of the risk factors in modern society and in their community. In order to gain such expertise, school personnel, when appropriate, could themselves conduct investigations of nutritional state and nutritional risks among children under their jurisdiction. Armed with such knowledge, school health personnel could then serve as nutrition consultants in the school and community.

3.2.2 Infectious diseases

Technological advances and changes in society have profoundly changed the nature of infectious diseases in many areas of the European Region. The new problem is to understand properly modern prevalence trends and characteristics of infectious diseases and their impact on young children of school age. Ironically, as our success in combating infectious diseases increases, so our knowledge of the residual problems decreases and our commitment to continue combating them sometimes also falls off. Infectious diseases are dynamic entities: the infectious agents change, the characteristics of the hosts change, modern travel is changing, as are the mix of hosts and agents; and all of this, combined with our inaccurate statistics, results in a poor present understanding of the role of infectious diseases in the age-group under discussion.

The Working Group made a general review of infectious diseases in children aged from five to nine years in the European Region.[1] The common infectious diseases in these children vary in accordance with the economic level of the child and the community, the health behaviour patterns of the child and community and the health services used. In the northern belt of the European Region, the most common infectious diseases in children are viral respiratory diseases, viral hepatitis and measles. In the southern belt of the Region (south of the Mediterannean), the same three infectious diseases are found together with the infectious diseases common to the developing world: parasitic infections, diphtheria,

[1] Studies on related topics include:

World Health Organization, Regional Office for Europe (1975) Tuberculosis control among migrant workers, Report on a Working Group, Bern, 22-24 April 1975, Copenhagen, ICP/MBD 002

World Health Organization, Regional Office for Europe (1974) Health aspects of labour migration, Report on a Working Group, Algiers, 6-9 November 1973, Copenhagen

World Health Organization, Regional Office for Europe (1973) Prevention of rubella, Report on a Working Group, Budapest, 12-16 June 1972, Copenhagen

tuberculosis, pertussis, etc. The central belt of the Region (to the north of the Mediterannean) is a grey area between the two main divisions.

Immunization against infectious disease presents problems today for several reasons: as yet there is no effective immunization against the most common infectious diseases for children; provider and/or consumer resistance to new immunization programmes can result in pockets of unimmunized or underimmunized children; at the same time, inadequate information on the duration of effectiveness of immunization can produce over-immunized children.

There are several special infectious disease risk categories for children in the age-group under discussion. The first risk situation is upon entry to school, as schools remain an important source for the spread of infectious disease. For many children, this is their first major exposure to common infectious diseases and a temporary rise in infection is usually unavoidable and perhaps necessary. Unimmunized or underimmunized children are another risk category. The children of migrant workers also represent a special infectious disease risk.

The Working Group stressed that solutions to present-day problems of infectious diseases in young schoolchildren should be geared to local community information on economic conditions, health behaviour, health services, and epidemiological data on local disease prevalence. It was also suggested that more information is needed on levels of immunity within a local population of young schoolchildren, but the Working Group could not reach agreement on this. Some participants felt that if all children are routinely immunized, such information is superfluous, though other participants argued that without such data there is a danger of over-immunization.

Three solutions emerged with regard to infectious diseases and the school. First, community programmes should ensure that all children received all appropriate immunizations prior to school entry. This should be followed by a continuing immunization programme during school years which can be conducted at school or outside school but with record linkage to the school. A second solution concerns the management of infectious diseases in school. The Working Group urged that current school policies on control of infectious diseases (including the practice of keeping children away from school) should be carefully reevaluated in the light of the best up-to-date knowledge of communicable diseases. As an example, some highly regarded paediatric organizations are now recommending that children with symptoms of upper respiratory disease but without fever should not be kept away from school since they have already passed through the most contagious pre-symptomatic stage of their illness. School policy in this area should also take account of the family situation and the educational needs of the child.

Thirdly, it was considered that the existence of infectious diseases could be used for school educational programmes. The programmes should be a team effort. The child could learn through active involvement

in the management and control of illness in the school. He could be taught by school health personnel to initiate care of himself at the onset of acute illness. Individuals in the classroom could be selected to control heating, ventilation, etc. Teachers and other school personnel could use the latest available information to help children to learn about infectious disease control. School health personnel could serve as consultants to establish school policy and consult with teachers and children. Parents could work with the school in establishing policy on infectious disease control in the school, home and community. The Working Group emphasized the leadership which school health personnel could provide in this team effort. Through study and close cooperation with public health specialists, the school physician and school nurse could establish themselves as legitimate authorities on the prevalence, characteristics, and control of infectious disease among children of school age in their community.

3.2.3 Accidents

The problem of accidents is perhaps the best illustration of the nature of present-day problems of children in the age-group under review. It is a problem which has existed for a long time but its importance has been obscured by the dominance of the traditional infectious diseases. It is a problem which is increasing, both relatively and absolutely, and this increase is clearly related to modern technology and recent social change. The origins of the problem lie neither in disease nor deprivation but rather conditions in the environment; the cause, the effect and the solutions all involve psychological and social factors. We know a great deal about the problem from the mortality point of view, but know little about morbidity, the large, submerged portion of the iceberg, and traditional solutions used with the traditional problems are not applicable here.

Unlike certain other emerging problems, accidents have received considerable attention in recent years. In the past, WHO has been actively involved and has published a number of reports.[1] Other international

---

[1] These include:

World Health Organization, Regional Office for Europe (1960) The prevention of accidents in childhood. Report on a Seminar, Spa, Belgium, 16-25 July 1958, Copenhagen

World Health Organization (1965) Domestic accidents, Geneva (Public Health Papers, No. 26)

World Health Organization (1957) Accidents in childhood; Facts as a basis for prevention, Report of an Advisory Group, Geneva (Wld Hlth Org. techn. Rep. Ser., No. 118)

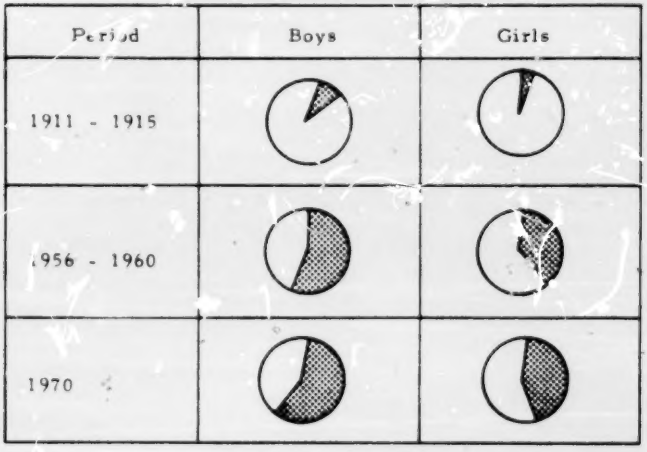
World Health Organization, Regional Office for Europe (1969) The prevention of accidents in the home, Report on a Symposium, Salzburg, 26-28 August 1968, Copenhagen

bodies have also examined the problem; the Council of Europe has conducted a coordinated research study of accidents in childhood in Europe,[1] and the problem was also discussed at the annual meeting of the International Paediatric Association in Vienna in 1972.

This considerable attention to accidents in childhood is the result of the growing prominence of accidents as a cause of death in young schoolchildren. This is well-illustrated by fig. 2 where it can be seen that in Sweden, accidental deaths in this age-group in the past sixty years have risen from being a very minor cause of mortality to being the prime cause. It is important to note that the increase is relative and follows the marked fall in mortality due to certain older causes such as malnutrition and infectious diseases. The incidence of accidental deaths in children has remained fairly constant over the past fifty years and is essentially the same in all countries in the Region regardless of level of development. In several European countries the overall mortality rate for these children is now, however, showing a tendency to rise for the first time owing to the increase in number of violent deaths.[2] Boys have always led girls in numbers of violent deaths (in Sweden they now account for 57% of deaths in boys and

Fig. 2

CHILDHOOD MORTALITY IN SWEDEN, 5-9 YEARS: PROPORTION OF ACCIDENTAL DEATHS



Source: Swedish Vital Statistics, given in Petersson, P. O., Accidents in childhood as a public health problem (document ICP/MCH 004/BD4)

[1] Council of Europe (1972) Accidents in childhood as a public health problem

[2] World Health Organization (1975) World Health Statistics Report, 28, No. 4, Geneva

36% in girls) although most recently there has been some evidence that girls are beginning to catch up. Traffic accidents are the most common fatal accidents, accounting for over one-third of all mortality and their relative contribution is increasing while the relative contribution of the second cause of accidental death, drowning, is decreasing.

While the incidence and characteristics of accident mortality is well-documented, little is known of the incidence and characteristics of accident morbidity in young schoolchildren. Most countries in the European Region do not collect statistics on accident morbidity and the Working Group was not familiar with any attempt at a cross-national study of such morbidity. At the same time, there is good evidence to suggest that accident morbidity is high and serious - it has been reliably estimated that for every child up to the age of 14 years who dies from an accident, another child will be permanently handicapped from an accident, 10 other children will be hospitalized for approximately 30 days from an accident, and 1000 other children will have an accident not requiring hospitalization.

The evidence also suggests that the pattern of non-fatal accidents is probably much different from the pattern of fatal accidents. One participant reported that in his country (one of the largest in the Region), sports form the chief cause of non-fatal accidents in schoolchildren. Some of the tools necessary for studies of accident morbidity, such as a new scale for grading the severity of injuries,[1] have already been developed.

Whether a childhood accident results in death or severe injury, the effect, psychologically and socially, on the family and community is tremendous. Furthermore, if the accident results in disabling injury, the impact on the child's entire life as well as the medical costs which must be absorbed by the family and/or community are enormous.

In discussing solutions to the problem of accidents in children of the age-group under review, the Working Group first indicated the need for more extensive study of the associated morbidity. One logical place to collect statistics on non-fatal accidents is the school; a recommendation was made that school health personnel might initiate such vital research. Such research should be so oriented that data generated could be of practical value in developing new methods of accident prevention.

In searching for solutions to the problem of accidents in childhood one must consider the total system, which though complex may be reduced to four general factors; hazards in the environment, children at particular risk, supervision, and education.

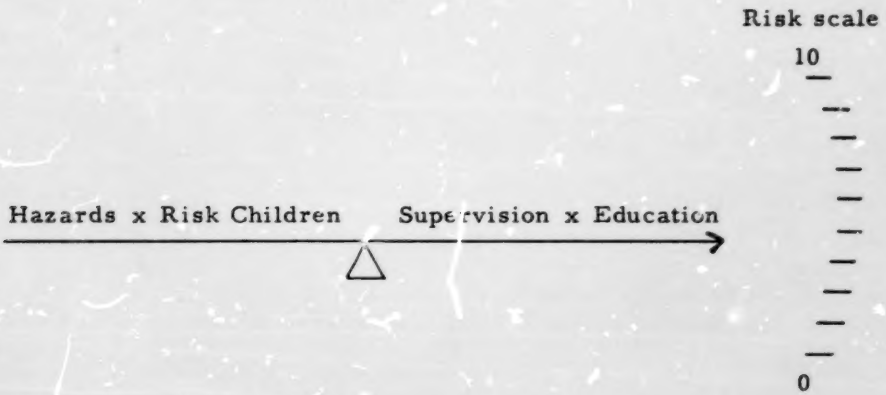
---

[1] Journal of the American Medical Association, 1971, Committee on Medical Aspects of Automotive Safety, 215, 277

The relationship of the four factors is illustrated in fig. 3. It is a hypothetical model, and each factor consists of a number of sub-factors. The basic relationship, nevertheless, is that hazards in the environment and the predeliction of the child to accidents are balanced by the supervision and accident safety education.

Fig. 3

THE RELATIONSHIP OF FACTORS INFLUENCING THE RISK OF ACCIDENTS IN CHILDREN



The Working Group discussed possible solutions from among the four factors. Programmes focusing on the first factor, hazards, are felt to show the most promise for effective accident prevention among young schoolchildren, and this is illustrated in two examples given by participants. One study revealed that a number of traffic accidents in schoolchildren occurred when they were going to school in the morning and returning home in the afternoon, in both cases, during rush-hour traffic. When school hours were shifted outside the peak traffic period there was an 18% decrease in traffic accidents in these schoolchildren. A second study showed that there were 10%-15% less traffic accidents in children who lived in an area of a city with large blocks possessing stores and playgrounds located within the blocks than in another area of the same city with small blocks, where it was necessary to cross streets to reach stores and playgrounds. Thus, environmental safety engineering is important for children, particularly those in the age-group under examination.

With regard to children at particular risk, all children aged 5-9 years are at certain times at risk, although boys who are exposed to traffic are particularly accident-prone. Such a risk group, however, is too broad for the design of specific accident programmes.

The third factor, supervision, is not as appropriate for children in the 5-9 year age-group as it is for younger children. Young children

of school-age are mobile in their neighbourhoods and beyond the reach of constant supervision. In fact, as participants pointed out, too much supervision during this age could have a damaging effect, by preventing the children from preparing for life by testing their environment.

The fourth factor in the risk of childhood accidents is education. There has been considerable emphasis in the past on safety education of children and the prevailing opinion of the Working Group was that the maximum effect of this factor had now been achieved. Several participants, however, suggested that perhaps new educational methods might be found which could increase the effectiveness of this factor in reducing risk. One member of the Group gave an illustration from his own country where a traditional road safety education campaign in a local school had not proven effective. Another approach was then tried in which the children and their teachers and parents were actively involved in measuring traffic flow, traffic hazards and traffic accidents in the neighbourhood surrounding the school. Armed with this data, the children, teachers and parents then designed a traffic safety programme which proved effective.

The Working Group stressed that, to be effective, child safety programmes must be a cooperative effort between government agencies including law enforcement, legislatures, public health agencies, educational institutions and special joint commissions formed to study the problem and recommend solutions. In such cooperative efforts school health personnel can, by assuming new roles and responsibilities, play an important role. By mounting studies of non-fatal accidents in and around schools, school physicians and school nurses can contribute vital information to the data base in this field. At the same time, through study and research they can achieve the expertise necessary to function as effective consultants in their schools and communities in the design and implementation of environmental safety engineering programmes and safety education programmes which actively involve children, teachers, parents, and community personnel.

3.2.4 Chronic diseases

The Working Group considered the special problems of children in this age-group handicapped by chronic disease. Such chronic diseases include not only severe physical handicapping conditions such as cerebral palsy, but also milder conditions such as diabetes and allergies. These milder conditions are often overlooked and yet they are much more prevalent and also produce the special problems to be discussed below.

The success in the treatment of malignant diseases (solid tumours, leukemia) also leads to a prolongation of life, sometimes to the cure of the children. These children are able to lead nearly normal lives but, on the other hand, require not only special and sophisticated medical treatment, but also psychosocial care.

Chronic diseases are certainly not new to children but must be included in the consideration of present-day problems affecting young

school-age children for at least two reasons. In the first place with the increasing success in combating acute diseases, chronic diseases play a relatively more important role in contributing to sub-optimal child development. Secondly, the increasing complexity and demands of modern society produce, as will be seen, increasing stress on the adaptation of chronically handicapped children to their environment. There is a growing awareness that chronic physical disorders have psychological and social as well as physical effects on the child. A background paper,[1] presented to the Working Group gave data showing the delay in social and psychological development in children suffering from certain types of congenital heart disease. The same paper discussed the daily social and psychological stress affecting the child with diabetes. Other studies have also documented distorted self-concepts among chronically ill children and disturbed family interactions. The result of these physical, psychological and social effects of chronic illness on children is to increase the stress caused by adaptation. Within the family setting, it is common to reduce this stress by adapting the environment to the chronically ill child. While this may reduce the stress at least temporarily, it has the disadvantage of creating an artificial world around the child such that the child is unable to test reality sufficiently. Then when the child enters school, the shock of the real world can be profound. Whatever the management of these children within the family, the Working Group emphasized that school entry is inevitably a greater traumatic experience for the handicapped children than it is for normal children (see section 3.3.1). In the case of normal schools and even in the case of special schools it is less possible to adapt the environment to the child and more necessary for the child to adapt to the environment. This means that stresses occur for the chronically ill child not only when he first begins school but also throughout his school experience. This stress increases the risk of maladaptation and subsequent social and psychological problems.

In discussing possible solutions to the problems of chronically ill children in this age-group, the participants agreed that services for them (medical, educational, social) vary from area to area but are more or less inadequate throughout the European Region. With regard to medical services, the Group recommended early intensive treatment to reduce social and emotional problems and to provide the child with the best possible preparation for schooling. It was also emphasized that since such children spend so much time receiving medical attention it is important for medical care, including hospitalization, to cover services to meet their psychological, social and educational needs. For example, even in countries in the most developed areas of the Region, there is an urgent need to increase the opportunities for parents to visit and/or live in with their children during short-term hospitalization and to increase the opportunities for the children to have access to play therapists and teachers during long-term hospitalization.

---

[1] Kanska, B. Problems of children handicapped by chronic diseases (unpublished EURO document ICP/MCH 004/BD5)

It is essential that schooling be provided for young school-age children with chronic diseases. The question is: what kind of schooling and where? Table 2 illustrates the various schooling possibilities. Between the two extremes, entirely normal education, and completely specialized education, there are a number of possibilities, of which only two are shown in the table. The Working Group discussed these schooling alternatives at some length as they again raise a fundamental question concerning children with chronic diseases, whether it is better to adapt the environment to the child (such as by providing a special school) or the child to the environment (by providing a normal school).

Table 2

SCHOOLING ALTERNATIVES FOR HANDICAPPED CHILDREN

School	S	N	N	N
Classroom	S	S	N	N
Teacher	S	S	S	N

S = special
N = normal

It was the consensus of the participants that every attempt should be made to place a handicapped child in an educational setting as close to normal as possible (in table 2, as far to the right as possible). The reasons for this are several: studies comparing handicapped children in normal schools with handicapped children in special schools have shown that although children in the special schools show slightly better academic performance, the handicapped children in normal schools are better at finding work. It appears that placement in as normal an educational setting as possible increases long-term adjustment to the real world. In this regard it is important for handicapped schoolchildren, whether in normal or special schools, to have opportunities to relate to the community outside the school. At the same time, having handicapped children in normal schools also provides normal children and their teachers with the opportunity to adjust to the fact that abnormalities exist among people.

Social services for young school-age children with chronic disease should include a system for supporting families in coping with and adjusting to the inevitable stresses they suffer from. This support system should include counselling for parents; special equipment or services (including home teachers) in the home when needed; and provision for the family to be temporarily relieved at times of the extra burdens incurred by the child with special problems. This temporary relief can take the form of day-care if the child is not in school, and should also include recreational services. Holiday camps and similar recreational programmes for children with chronic diseases provide the double service of giving these children the recreation they need and at the same time giving the families the relief necessary for proper perspective.

It is clear that if young school-age children with chronic diseases are to be properly placed educationally and are to receive the best combination of services in the home, school and community, it is essential to employ professionals who understand all the special problems of these children: medical, educational and social. School physicians and school nurses are uniquely qualified for this task. School health personnel have an important role in assessing the best school for each child with chronic disease, in working closely with school personnel in establishing reasonable educational goals and preventing overprotection at school, and in working with lay people and professionals (public health nurses, social workers, physicians, etc.) in the community to operate coordinated services for these children.

3.2.5 Slow learning

While slow learning is not new, it is a "new" problem for children in the age-group under consideration because increasing technology and social change have resulted in increasing societal and parental pressure for success in learning at school. Slow learning can stem from many phenomena, including slight retardation, dyslexia, perceptual-motor dysfunction, social or cultural deprivation, etc. Consequently, it is hard to determine the prevalence of this condition since it is difficult to define, difficult to measure, and since awareness of the condition is often connected to available services.[1] The confusion surrounding the problem is exemplified by the difficulty in terminology; there is not even agreement on its proper title. The present Working Group began by using the terminology "slight mental retardation" but then agreed that "slow learner" or "exceptional child" was better. Part of the problem with terminology relates to the problem of labelling; once a child is, for example, classified by the school system as being slightly mentally retarded, this label then influences everything that is done to or for that child in the school in the future. Such labelling is particularly dangerous since our scientific understanding of the various elements in this condition is, in many cases, poor and can result in misdiagnosis and mislabelling.

The problem of terminology is further aggravated by the fact that in the past much of the work on the condition has been done by professionals from the health field and, as a result, medical models and medical terminology have been applied. And yet as we learn more about the various disorders underlying this condition, it appears that many of the etiological factors are of a psychological and social nature and the medical model is inappropriate. As one of the working papers phrased it: "We can test children with psychological and educational measuring materials and the

[1] This subject was treated in more detail at the Conference on the Care of the Mentally Retarded in the Community, Santiago de Compostela, 25-29 June 1974 (EURO 5440 I)

result will be unreliable scores based on standards, averages and deviations from average. We invent diagnostic instruments and use a terminology adapted from somatic medicine, hoping to find characteristics in our clients that will help us understand more accurately the slightly mentally retarded child, with a rather meagre result."[1]

The child with a slow learning problem is usually first identified after school entry. This is because most of these children are normal in all respects save the ability to learn at the required speed using the usual teaching methods. Then suddenly the child, the parents, and the teacher are faced with the possibility that the child has a special problem.

The Working Group was in agreement that if some slow-learning children are perhaps retarded, so too is the present system for managing the condition. The usual course of events today is for the classroom teacher to refer the slow-learning child to the school psychologist for evaluation. The psychologist is at a disadvantage in that he or she is not normally present in the classroom and has not observed the child over a period of time. In a space of one or two hours or less, the psychologist must determine the child's fate. If the evaluation suggests slow learning, the child is removed from the normal classroom and transferred to "remedial education" classes or to a special school. Such a transfer means a shifting of responsibility not only from the regular teacher to a special teacher, but usually from one branch of the ministry of education to another branch. In such a system, the psychologists find themselves in the quandary of having to decide who they in reality serve, the child or the school. Transferring the child and shifting the responsibility does not remove the problem from the child nor from society.

The present system of management is further complicated by the fact that if testing suggests that the child's learning problem is associated with "minimal cerebral dysfunction", "perceptual motor dysfunction" or other presumably organically based disorders, diagnostic or treatment services which come under the ministry of health become involved. This further shifting of responsibility, in many cases, produces further confusion because of lack of coordination (if not conflict) between the various ministries and their various divisions from national down to local level.

In discussing solutions to the problems of slow learners, the Working Group made two general recommendations: integrate the child and integrate the system of management. The child's integration should occur at two levels, in the school and in the community. In the school, children with slow learning problems should be integrated with the normal classroom in the normal school. Any necessary special services, including specialized teachers and school psychologists, should be brought

---

[1] Asheim, S. Problems of (slightly) mentally retarded children (unpublished EURO document ICP/MCH 004/BD12)

into the regular classroom. In the community, children with slow learning should be integrated with normal neighbourhood activities. Closer and more frequent communication between school personnel (including teachers, psychologists, physicians, nurses) and the community (including parents, social workers, public health nurses) will facilitate increasing community acceptance of such children.

Ultimately, the system of management for slow learning children must be integrated at the local level. Efforts must be directed towards obtaining closely coordinated and integrated health, educational and social services in the local neighbourhood. The Working Group saw this as a long-range goal and, in pursuance of it, successfully integrated local programmes should be studied and used as models. One such successful model was presented to the Working Group - the Vindafjord project in Western Norway.[1] In this project the local health office (including public health nurse), the day care centre (kindergarten), the library, the primary school, the school dental office and a community meeting room are all located in the same building. Description of the many services integrated in the project is beyond the scope of the present report, but relevant is the fact that slow learning children in Vindafjord remain in the regular classroom and are integrated into the community. In studying successful models such as this, it is as important to analyse the methods of achieving such integration and cooperation as it is to analyse the results of coordination of services.

3.3 Environmental risk factors

3.3.1 School entry

As has been previously pointed out, school entry is a major turning point in the life of the young child. As such, it is inevitably a stressful period for all children. This stress is mainly the result of two factors: the need to adjust to a new environment and the need to adjust to the pressure to perform. The degree of adjustment to the new school environment is directly related to the disparity between the home and school. There is some degree of disparity between home and school in all families, but in families where the values, language, attitudes and milieu are more distant from the school - poor families in non-poor areas, rural families in urban areas, migrant families, immigrant families - the stress of absorption into the school system will be greater than usual.[2]

---

[1] Asheim, S., op. cit., p. 20

[2] The special problems of migrant families was dealt with by the Working Group on Tuberculosis Control among Migrant Workers, op. cit., p. 10

The degree of adjustment to the pressure to perform, clearly, is directly related to the amount of pressure applied. This pressure comes from all sides (parents, teachers, older peers) and is the result of the fact that "failure to function in school is not tantamount to failure in life but it comes perilously close in this day and age".[1] The pressure is epitomized by and often focused on the importance of learning to read.

In discussing entry to the school system, the Working Group again addressed itself to the central issue: the degree to which the child should adjust to the school and the degree to which the school should adjust to the child. While it is obvious that there must be some adjustment on both sides, there was strong opinion among the participants that up to the present the balance has not been correct; too much adjustment has been required of the child and not enough of the school. One phenomena which exemplifies this imbalance is the tendency of schools to divide children at young ages into categories, such as slow learner, and to label and separate them on the basis thereof. The labelling results in a self-fulfilling prophesy, as has been shown by a research study which demonstrated the Pygmalion effect: one group of children presented to the teachers as dull did poorly, whereas another group presented as bright did well, even though the two groups had been chosen at random from a group of homogeneous children.

In the balance between school and child, the teacher plays a central and difficult role. The teacher stands in the middle, between the child and the school, and also acts as middleman between parents and the school. In spite of their key role, teachers suffer from low status and often from low pay. The Working Group stressed that the teacher with the lowest status is often the teacher of the lowest school class: the class where the crucial stage of induction to school life occurs, and which demands teaching skills of the highest order.

As the institution delegated with responsibility for the education of society's children, the school must balance its loyalties between the demands of society in general and the wishes of the parents of the children attending it. The Working Group felt that up to the present this balance has also often not been correct; at times the schools have been excessively obedient to the goals of society and have not given enough consideration to the wishes of parents. This imbalance may result in parents not only being uninvolved in school programmes, but also not welcome in the school.

On the other hand, the school finds itself in a difficult dilemma today, as more and more is demanded of it. As the school's responsibilities increase, it is gradually becoming more and more of a local community institution designed to provide a variety of services to children. At the same time, the planning of schools (including architecture, staffing, funding) in many cases has yet to take account of this trend.

---

[1] Bower, E.M. (1960) Early identification of emotionally handicapped children in school, Springfield, Illinois

In discussing possible solutions to problems associated with school entry, the Working Group made several general recommendations. The first recommendation was to bring the community gradually into the child's life prior to school entry. Changes in society, such as the evolution of the extended family into the nuclear family, have reduced the opportunities for the child to begin to adjust to the community outside the home prior to school entry. The preschool child can begin to experience the world outside the home through such means as educational television and informal local play groups organized by parents.

The second recommendation concerned the evaluation of preparedness for school. In this regard, the Group emphasized that the first evaluation should be to determine if the school is ready for the child before determining if the child is ready for school. In assessing the readiness of the child for school, there was agreement that no formalized tests yet devised are sufficiently reliable for this purpose. It appears that the best assessment comes from evaluation by preschool teachers together with the initial evaluation of the classroom teacher in the primary school. The participants also believed that the school psychologist should focus on evaluating the school and the child in the classroom rather than on evaluating the family.

The third general recommendation concerning solutions for problems associated with school entry was to bring the school to the child, but to do so gradually. In this regard, the first suggestion was that, in general, seven years of age is too late for the initial entry to school and, whenever possible, there should be some preschool experience. There needs to be a reassessment, however, of preschool programmes because in many areas the children who need such experience the most (children from poor families, rural families, migrants, etc.) are the very children with the least opportunities for preschool. Another suggestion for bringing the school to the child gradually was to have teachers of the first school class who are of the highest quality. The most desirable qualities for such teachers (empathy, warmth, and clarity in expression) are qualities one hopes to find in good parents and are the qualities which will aid the young child in adjustment to school. In order to attract the best candidates (who should include men) to teach the crucial first class in school, it was recommended that these teachers should receive a salary equal to the importance of the task they perform for society. One participant reported that in his country teachers of the first school class received a salary equal to that of other teachers, including secondary school teachers.

In bringing the school to the child gradually, the participants also recommended a number of practical steps which have been tried with success in their countries:

(1) There are three hours obligatory attendance at preschool at the age of six and a voluntary three hours attendance at the age of five.

(2) All children scheduled to enter school in the autumn come to the school for one week in the spring, when children already at school have a holiday.

(3) The first year in school is extended to two years rather than "holding back" children who "fail" the first year.

(4) At the beginning of the school year new children are brought to school singly, to meet the teacher and spend time alone with him or her.

(5) The teacher of the first class stays with the same children for a number of years.

(6) A parent comes with the child for the first several days of school, sits with the child and serves as a model for the child by following the teacher's instructions.

(7) An older child at the given school is assigned to each new schoolchild and stays with him or her for a period of time to act as a guide.

The Working Group also recommended that special school entry programmes should be provided for children at high risk, especially immigrant children or children from families moving home within one country. The special programmes can help to bridge the gap between home and school and bring some of the home into the school in the form of language, customs and parents and other personnel.

The fourth recommendation in respect of school entry was to bring the community more into the school and the school more into the community. Such moves would lessen the gap between home and school and reduce the shock of school entry. As an important first step in this direction, parents should be more involved in the school, in daily activities as well as in decision-making. As schools become more and more integrated into the rest of the community the young schoolchild will no longer perceive the school as being a separate, isolated institution.

The school health personnel can play a vital role in all of these recommendations regarding school entry. By spending time in the regular classrooms, the school nurse and school physician can become familiar with the school environment. By visiting homes of schoolchildren, they can become familiar with the home environment. Through study and observation, they can familiarize themselves with the biological, social and psychological aspects of school entry. They can then use all of this information in promoting the evolution of new school and community programmes to reduce the disparity between home and school.

3.3.2 Urbanization

Increasing urbanization is a phenomenon common to all areas of the European Region. Responses to this phenomenon have varied widely but, in general, the solutions to date seem to have often created as many problems as they have solved, especially for the young schoolchild. Over the past several decades, urban renewal has produced large-scale, highly structured, high-rise living quarters for families in urban areas. This has had some good effects on health. In one country in the European Region, a carefully controlled study showed that if the morbidity index of children living in unimproved housing is taken as 100, in housing with some amenities the index falls to 92 and in housing with full amenities it will be 88.

But this morbidity is only for physical illness and, as we have seen, the "new problems" of young schoolchildren have come to be more due to emotional and social factors. Thus, new urban housing with amenities often fails to provide for the optimal social and emotional development of young schoolchildren. This age-group needs opportunity to explore and have informal contact with materials and processes, to watch people doing jobs, see animals and have experience of the natural environment, together with the chance to mould, alter and experiment in fashioning the world they inhabit. Urbanization means detachment from natural processses and resources, means less opportunity to explore their environment, means too many rules restricting conduct, means too big a scale for small children, and finally, it provides little or no chance for restructuring.

Urbanization has also aggravated the problem of pollution which, in this case, is of a physical nature. Many workers in different countries in the Region have reported greater respiratory morbidity in schoolchildren in urban areas than in rural areas. An earlier WHO Working Group[1] focused on this problem, and its report includes data from a number of countries in the European Region demonstrating the detrimental effect of urban air pollution on the respiration and breathing function of children. Noise pollution is such a recently discovered new problem of urbanization that there is, as yet, not so much data as with air pollution. One study in the Region showed a significant positive correlation between the noise level in a neighbourhood and the number of visits to outpatient and inpatient health services, suggesting that our ears are truly our nerves.

Another problem in urbanization discussed by the participants was the lack of involvement of the public, and especially children, in urban planning. The "squatter" settlements on the fringe of many large urban areas are rejected wholesale by professional urban planners, yet they have been "designed" by the inhabitants and reflect the needs and character

---

[1] World Health Organization, Regional Office for Europe (1974) Long-term programme in environmental pollution control in Europe; Chronic respiratory diseases in children in relation to air pollution, Report on a Working Group, Dusseldorf, 17-19 April 1974, Copenhagen

of those living there. Germane to our discussion is the fact that such settlements are a delight for young children of school-age because of the possibilities for exploring and restructuring. So to date we have, in most urban areas, two extremes: the professionally planned highly structured dwellings with amenities and the lay planned, unstructured dwellings with few or no amenities.

In discussing solutions to the problems caused by urbanization for children five to nine years, there is an apparent need for further research in this area. Many questions need answering, such as the effect of noise on school performance, and the consequences of living in high-rise flats on the social development of schoolchildren.

A second recommended solution of the Working Group was to make urban planning a team effort involving professional and lay collaboration. Parents would be an important constituent of this team because of their knowledge of family habits and the supervision needs of children. Families not in the mainstream of the community such as migrants would also be able to make an important contribution because of their knowledge of their special habits and needs. Children five to nine years should also play a part because of their understanding of the need for small scale and flexibility and also because of their naive but penetrating observations of the world.

Another general recommendation regarding the effects of urbanization on children is the need for a local community which should be small enough for the people living there, including the children, to recognize its borders and identify with its inhabitants and institutions. One natural definition of such a community is the area served by the local primary school. Services can be located in a small area in such a way that they can be integrated and adapted to community needs. The local primary school can be planned and designed to meet more general local community needs.

With regard to the problems of urbanization, the more developing areas of the European Region have a special opportunity. Building and expanding has yet to occur and urban areas are not yet fixed in concrete. Furthermore, in many developing areas some of the suggested changes, ironically, already exist: local communities with a character of their own can be found and there are in existence schools which provide a variety of services, including local health services, and which function as local community centres. It is to be hoped that many of the mistakes which have been made in the more developed areas will not be repeated.

3.3.3 Non-optimal social and economic conditions

In order to understand the problems of children in the age-group under review living under non-optimal social and economic conditions, the Working Group first reviewed some recent trends in the European Region. The increasing gross national product which all countries in the Region have experienced, is the result of increasing industrialization

and has precipitated a mass migration from the rural to the urban areas and from the less developed to the more developed areas. This migration has occurred within and between countries in all of Europe, regardless of level of development. Most recently, widespread unemployment has also been found in many parts of Europe. Such migration and unemployment has had an impact on family life. Pre-industrial family life must rapidly change and this involves changing value systems, changing concepts of time and space, changing parental roles, changing emotional and social support systems within the family context, changing dialects or languages. Such changes increase stresses within families and increase family disruption and disintegration. There is, in general, a gamut of stresses on families affecting: migrant families most, then families that have moved from the country to the town, and then the upward socially mobile urban families. All of the above stresses and changes influence the development of children five to nine years of age. Family stress and disruption have resulted in less supervision of children, leading to the latter fending for themselves in the streets. Unemployment and broken homes have resulted in informal child labour even in this age-group, and community opinion is frequently punitive toward such children.

These social and economic changes have also had a major impact on the primary school. The school, which must help to socialize the child for society as a whole, reflects the attitudes, value system, goals, and so forth, of the dominant elements in society. The school, which has been given the task of educating all children for society, uses teaching techniques which have been found to be effective for most children. But research has shown that children living under sub-optimal social and economic conditions are less well prepared for school. There is a disparity between the sub-culture of the child's family and the cultural set of the school, which can lead to considerable misunderstanding between the child and teacher. Child-rearing in these families is so different that the children have a different development and the usual instruments for testing children's abilities and the usual teaching methods are both inappropriate, ineffective and misleading.

The consequences of the disparity between the socioeconomically deprived child and the school are considerable. The increased shock of school entry for such children has already been discussed (see section 3.3.1). Some data reveal that socioeconomically deprived children contribute a disproportionately large share of the children who never attend school, run a significantly increased risk of leaving school before the age of 12, are at higher risk for repeating classes, and are at higher risk of being labelled by the school as mentally retarded or mentally ill. Other studies, done in the most highly developed areas of the European Region, show that children from the lower socioeconomic classes are more likely to leave school at the end of primary education, even when their school performance and tested ability is better than that of their middle- or upper-class peers.

Another important consequence of the disparity between the socioeconomically deprived child and the school is that these children are much

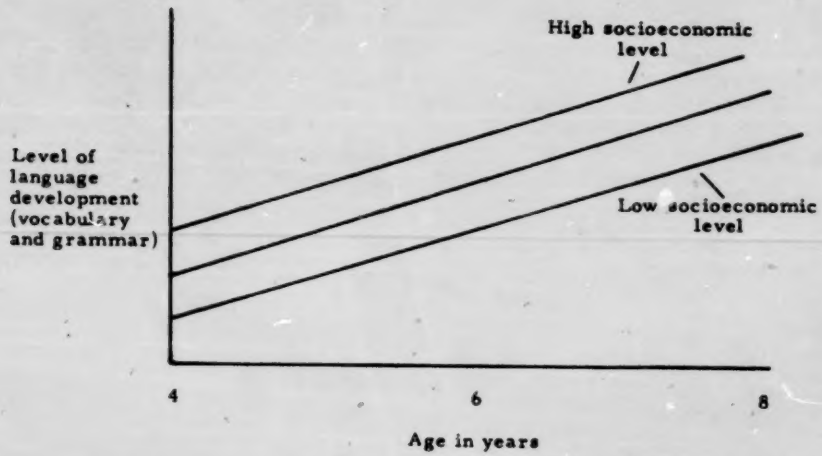
more likely to display a failure to learn when the traditional teaching methods are employed. This is important in the age five to nine, for it is during this period that children learn to read. Many studies have demonstrated a relationship between learning to read and socioeconomic status. One example is given in fig. 4 where it can be seen that language development, which is fundamental in learning to read, is strongly influenced by socioeconomic status: children aged six of lower socioeconomic status have the same level of language development as children aged four but from upper socioeconomic levels. Since difficulty in learning to read is most common among socioeconomically deprived children, selecting children for separate special education programmes on the basis of reading failure will result, essentially, in separating children on the basis of socioeconomic level.

The schools, in attempting to cope with children who are failing to meet the school's standards for learning or socializing, have formed special education classes within regular schools. Because cognitive development is different in socioeconomically deprived children (see fig. 4 for example) such children will experience initial learning problems at school and when tested by the "standardized tests" of the school often will be labelled as mildly mentally retarded. The children are then sent to special education classes. Because social development (and social values and customs) is different in socioeconomically deprived children, such children will experience initial problems in social adjustment at school and when tested by "standardized tests" of the school often will be labelled as having a "behaviour disorder" or "mild mental illness". These children then get sent to special education classes, which thus become filled with such children, many of whom subsequently leave school (only one per cent of children in special education classes ever return to normal classes). In less well developed areas, this early school leaving is tolerated because the lower technological levels in the area do not require the same level of education and because the family can benefit from the income which can be provided by the child if he or she finds a job. This process of marginalization of the young school child who comes from a non-optimal social and economic background occurs at an earlier age in less developed areas but also occurs, albeit at a slightly older age, in the most developed areas of Europe.

The main solution to problems faced by young children of school age living under non-optimal social and economic conditions is clearly a sociopolitical one. Nevertheless, subsidiary solutions must be pursued and the Working Group made a number of recommendations in this regard. The first recommendation was for a re-examination of policies regarding the classification of mental retardation and mental illness in children. Recently acquired knowledge concerning the social and cognitive development of socioeconomically deprived children needs to be incorporated into such policies. A second recommendation was for a re-evaluation of preschool programmes to determine if they are meeting the special needs of the disadvantaged child.

Fig. 4

RELATIONSHIP BETWEEN LANGUAGE DEVELOPMENT AND SOCIOECONOMIC LEVEL OF CHILD



Source: De Vries, A.K., Some social and socioeconomic factors in connexion with children who need special attention (unpublished EURO document ICP/MCH 004/BD7)

The participants also made recommendations for change within the schools. These recommendations are all based on the principle that if a disadvantaged child is having difficulty at school, the first question to be addressed is not "what is wrong with this child", but "what is wrong with the school". Thus new teaching techniques need to be used which are not punitive for the disadvantaged child. One participant, for example, demonstrated a new method of teaching reading which does not start with symbols and which reduces the shock of learning to read.[1] Policies regarding placement of children in school need re-examination. The Group suggested that, in general, children should not be categorized early in their educational careers and separated into special classes and schools. Rather the special teaching techniques and/or personnel can be brought to the regular classroom (see also section 3.2.5). Because of the special characteristics of socialization of disadvantaged children in the modern world, it is important to use male teachers whenever possible. It was also recommended that parents and other community members from the poorest areas be more actively involved in the school in order to reduce the discrepancy between the disadvantaged children and the school. This could be part of a broader programme of community services aimed at the parents of these children.

[1] De Vries, A.K. op.cit.

A final recommendation of the Working Group regarding children living under non-optimal social and economic conditions is for more research into the problem. Two types of research need high priority: studies of the socialization of disadvantaged children, and studies of the system of services for these children. School health personnel are one group of professionals who could initiate such research projects. The Working Group, in fact, emphasized the key role which school physicians and school nurses can play in all of the recommendations made for disadvantaged children. They can be influential in the re-examination and re-evaluation of present-day school policies and school programmes and in the implementation of new policies and programmes for these children both in the school and in the community.

4. SOLUTIONS

4.1 Present-day solutions

With regard to present-day solutions for the problems of children in the five-to-nine years age-group, the Working Group focused first on the health services available, about which there is little data available. In the past few years, the Maternal and Child Health unit of the WHO Regional Office for Europe laid a sound foundation for obtaining such information by sponsoring three studies and through the Working Group on the Evaluation of MCH Services.[1] While the studies are limited in that they do not cover every country in the Region and are not able to examine individual services in great depth, they have provided previously unavailable data for an overview of the present situation.

Health services for children five to nine years vary widely through the Region. In the WHO studies, the services for children five to seven years were included in the preschool MCH services a qualitative assessment of which, based on types of activities and coverage, gave the following ranking in the Region: East > North > West > South. On the other hand, a similar qualitative assessment of the school health services showed a different ranking: North > West > East > South. The rankings reflect different organizational approaches to the services, except in the South where economic constraints conspire to create serious gaps in services regardless of organizational arrangements. In addition to this variability, another characteristic of the services is that they were originally developed for earlier problems and, without exception, have not evolved rapidly enough to keep up with the new problems.

---

[1] op. cit., p. 2

Most countries in the Region offer preschool education to only about half of the children five years of age. In countries where the health services for preschool children form part of a public health service, the transfer of information from the MCH services to the school health services is satisfactory. In other countries where MCH services are primarily the responsibility of private physicians, this transfer of information often fails to take place and may be considered undesirable. It can even be reduced to the formula: "if the school physician wants to know something, he can telephone the family physician".

The WHO studies reveal that in most countries school health services consist basically of school physicians, often but not always supported by school nurses. The employment of psychologists and social workers is more the exception than the rule. In five of the nineteen countries surveyed, school dental services are not fully developed.

The importance of a team approach to school health services is acknowledged in all countries, but in practice it is very rare to find a truly multidisciplinary team. With regard to parents as team members, with few exceptions it is the rule for parents to be present at the child's first physical examination, but further parental participation is minimal. There is great variability in the degree of collaboration between teachers and school health personnel, ranging from regular meetings with an exchange of information to a rigorous separation between the educational and health fields. In many places, collaboration between school health personnel and school psychologists and social workers appears to cause most problems. In other places, the serious shortage of psychologists and social workers in the schools must be overcome before collaboration can become practicable. In the rare cases where an integrated team approach is found, experience is reported to be very good.

There is also considerable variability in the quantity and quality of collaboration between school health personnel and curative health personnel outside the school. In those countries where curative health services are part of a public health system, the relationship appears generally good, and information is exchanged effectively. In countries with private practitioners as the main providers of curative health care, there is a great degree of variation. This variation is at least in part due to the varying image of the school physician. Unfortunately, the professional status of the average school physician is low in many countries and this seems to have direct repercussions on the quality of the exchange of information.

In all countries a structured school health record is used. Most of the records are of the traditional type with observations recorded in free text. Most records cover only the school years, although in a few places a single health record to cover the entire span of childhood has been adopted. It does not appear that there is any attempt to exercise quality control over records. School health statistics in most countries are also of the traditional type: activities are counted, not problems. Only cumulative raw data is collected and it is used primarily (if not exclusively) as a means of checking whether certain activity norms have

been fulfilled. The traditional school health statistics cannot be used either for epidemiological studies or for morbidity statistics because the population on which observations are made is not well defined. The present records and statistics cannot therefore be used as a source of information on the problems of schoolchildren. This fact combined with the lack of feedback to the providers of the data (usually school nurses) contributes to the low motivation of the staff over keeping careful records and statistics, and so contributes to the inferior quality of primary data.

The WHO surveys also reveal certain recent changing trends in school health services. Repeated routine examinations are being gradually abandoned in favour of specified screening tests performed at selected ages. The traditional role of the school physician is being challenged in many countries although, in most cases, a final decision with regard to new roles has yet to be made. Systematic data collection and data analysis of school health records is also widely discussed. Various systems are now being designed or, in a few cases have been already implemented, but none have been in operation long enough to allow for the demonstration of a possible impact on the health of the pupils or on the care they receive.

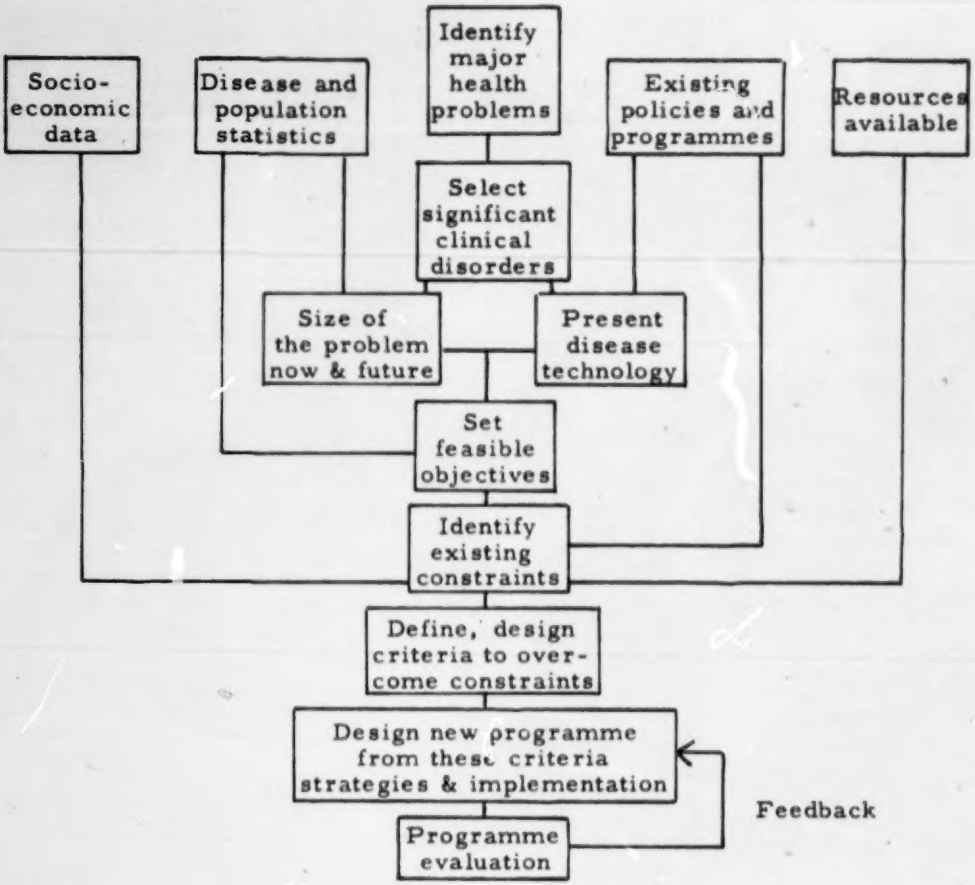
4.2 Changing the solutions

It is clear that present-day solutions are not, in many cases, coping with the new problems of children in the age-group under review. The Working Group discussed how to make a proper plan to change the solutions. One approach to such planning is shown in fig. 5. Irrespective of the type of planning employed, the participants agreed on several important planning principles. The first principle is that planning should be problem-oriented; planning should begin, not with consideration of existing services, but rather by identifying the major problems needing to be solved. It was equally important to determine first if the problem can be prevented before planning any services to meet it. For example, once reading failure is identified as a problem, before designing programmes to rehabilitate reading failures, the next step is to determine if changes in the way reading is taught might prevent some reading failures.

A second principle is not to "professionalize" the planning process. If planning is a team effort which includes consumers of the services as well as the providers, the dangers involved in professionalizing both the problem and the solution can be minimized. Solutions should include consideration of the child, the family and the community. In designing programmes, it is easy for professionals to overestimate the importance of the contribution that they and their professional colleagues can make to the solution and to underestimate the contributions of the general public, who are the consumers. This is particularly true for many new problems; it is not difficult to realize that with problems such as nutrition and accidents, the family and community can play as important a role in solutions as the professionals. Solutions to the new problems, then, should be family-centred and should emphasize self-care both by the child and the family.

Fig. 5

PROBLEM-ORIENTED PLANNING SCHEME



Source: Zealley, H. Health protection and promotion: a general outline (unpublished document)

Another important principle of planning is to include evaluation of the programme after it has been implemented. This evaluation should include analysis of the effectiveness of the programme in relation to the problem for which it was designed; it should also be problem oriented, not just service- or activity-oriented. The programme evaluation should

also include cost/benefit analysis when feasible. Systems analysis is an important tool in programme evaluation and should be employed whenever feasible. The results of programme evaluation should be fed back to those working in the programme with the aim of using them for in-service education and motivation, and should also be fed back to the planners so that programmes can be modified or redesigned on a rational basis.

A principle of planning which is often overlooked, especially by health professionals, is the need to focus on the positive aspects of health. The Working Group underscored the importance of considering not only such negative goals as relief of pain, but positive goals such as adequate recreation and sports in planning programmes for the young schoolchild.

4.3 Surveillance

One particular aspect of solutions focused on by the Working Group was surveillance. In an age-group characterized by low mortality and large numbers of healthy individuals, surveillance is a key to the identification of problems. The participants tried to discover what conditions or problems should come under surveillance and what conditions should be screened for. It was difficult to decide on this because of the dynamic character of the new problems and the paucity of information on morbidity in children five to nine years. It is also relevant to establish exactly who decides what it is most important to screen for and control. This is especially difficult because health professionals, educators and parents are all involved in the management of children and often have quite different opinions on their problems and needs. While health and education specialists have knowledge of the available data on mortality, morbidity, and allied matters, they are often not familiar enough with the real problems and needs of the children, in their daily lives in the family and in the cultural context. On the other hand, parents are not sufficiently aware of problems and needs outside the home. The best solution appears to be for decisions regarding surveillance to be made by all those involved with the children.

Once a decision is made as to what conditions should be screened and controlled it then becomes important to establish the best methods for doing this. As new problems are identified, the old methods of screening and control become less and less appropriate. This is clearly illustrated in table 3 where the clinical physical examination by a physician, the cornerstone of the traditional school health programme, is found to be ineffective in identifying nearly all present major causes of mortality and morbidity among children in the five to nine year age-group. This list, moreover, does not include many of the "new" problems of these children. The review of risk factors has made it clear that for each risk condition, new specific screening and control methods must be developed, and these methods may even vary by area, depending on the local nature of the problem. The Working Group agreed that the new methods should include measurement of functional capacity, as well as traditional measurements of static state.

Table 3

VALUE OF SCREENING TECHNIQUES WITH THE MAJOR CAUSES OF MORTALITY AND MORBIDITY

Children aged 5-9 years (Scotland - 1971)	Possible identification, routine physical examination by doctor	Possible identification, specific screening by nurse
Major causes of death		
Accidents	No	No
Neoplasms	No	No
Major causes of morbidity and handicap		
Minor respiratory infections	by chance	by chance
Dental caries	No	Yes
Tonsillar enlargement	Yes	No
Behaviour disorders	No	possibly
Enuresis	No	Yes
Refractive errors	No	Yes
Undescended testes	Yes	No
Intestinal infection	No	No
Injuries and poisoning	No	No
Hearing defect	No	Yes
Speech disorder	No	Yes
Squint	Yes	Yes
Obesity	Yes	Yes

Source: Zealley, H., op. cit., p. 33

Part of the surveillance methodology is choosing who will perform the screening and control. With regard to initial routine screening procedures there was a consensus in the Working Group that, as far as possible, such procedures should be done by nurses, technicians, trained parents or other lay people. As regards continuing surveillance of the children, there was no agreement in the Working Group. Some participants felt that teachers are in a good position to carry out health observation of the children because of the many hours they are in close contact with them and because their training is relevant for some of the new problems. Other participants felt that teachers are poorly trained for this, that they cannot be adequately trained, and are too likely to reflect the value system of the school in defining deviations among the children.

Once a screening method has been chosen, it is then important to establish methods for classifying deviations and recording results. While classification systems might vary by area according to local needs, the participants suggested three principles which should be incorporated into any system: classification should be based on the concept of risk; it should include not only headings ranging from healthy to sick, but should also cover the full range of functional capacity; and should include a category for placing children who have no measurable deviation yet show findings which raise the suspicion that sub-clinical problems or problems will occur in the future. Such an intermediate category avoids inflexible nosology categories.

The participants also stressed the importance of vigilance against several dangers of screening and control procedures. The first danger, labelling and its subsequent Pygmalion effect, has been discussed previously (see section 3.3.1). It is very easy to apply a diagnostic label but most difficult to erase the label and its results subsequently. The second danger of screening programmes is to identify problems for which there are no solutions, either because solutions do not yet exist or because of insufficient means to provide solutions. In such circumstances, identifying the problem often leads to anxiety, frustration and/or anger on the part of the child and family. A third danger of screening programmes is to identify problems for which there is questionable treatment or where the danger of overtreatment exists. A classical example of this risk is the case of the screening, several decades ago, for enlarged thymus glands in young children which, when found, resulted in radiotherapy. This type of therapy was subsequently shown to be not only unnecessary but to have increased the incidence of cancer. At the present time, it may be that the identification of enlarged tonsils and retractile testicles (see table 3) is not important and may lead to unnecessary and occasionally dangerous treatmen .

Their discussions on this subject led the Working Group to generate a basic scheme for the surveillance of children five to nine years. The first element in the scheme consists of initial screening and evaluation prior to entry to school. It is expected that this evaluation would have many elements, depending on previous health services and on local conditions. There was no consensus as to whether the evaluation need include a physical examination by a physician. Some participants reiterated the low yield from such examinations but others pointed out that it can be an important social event between the family and school health personnel and could help establish a firm data base on the child. There was unanimous agreement, however, that physical examination by a doctor should be done before school entry if the child has not had one in the recent past; that such an examination must in all cases be supplemented by other specific screening procedures; and that the examination should be done long enough before school entry to allow correction of problems before the child starts school. Moreover, such an examination should either be done outside school in the place where the child receives its regular general health care or, if done in school, it should be linked closely to general health care through an effective exchange of information.

The second element in the scheme for an ongoing continuous surveillance programme (including educational, social, psychological, and physical elements) would be carried on by a team, each member of whom would have an individual role to play. The child would be taught to observe his own health and that of his peers and to initiate action when deviation is suspected. The parents and local lay community would provide an understanding of the home milieu and home values and carry the primary responsibility for the child's care. The school physician and school nurse would provide health perspective and a liaison with the medical community and consultants. The teacher who has prolonged contact with the child would provide the educational perspective. The school psychologist would provide the psychological perspective. The neighbourhood public health nurse and social worker would provide an understanding of the local community and its services.

A continuing dialogue among team members is essential both to understand the individual child and the perspective and contribution of other team members. As one participant said, "School doctors and teachers see problems very differently and these differences can only be overcome by dialogue because both are wrong". All of this requires changing roles for the team members. Teachers must expand concerns and responsibilities; school health personnel must change their tasks and focus; and parents in the community must become more involved in the school.

4.4 Health education as a solution

Present-day health education for children five to nine years, like health services for them, reflects their traditional problems. The content of these educational programmes puts emphasis on physical disease and physical hygiene. The methodology of the programmes reflects an over-professionalization with a paternalistic approach characterized by the idea "Do what I tell you, if you want to be healthy". New solutions are urgently needed in health education for young schoolchildren: solutions involving both content and methodology, and solutions which are directed not only towards the child, but also towards the teacher, the parents and the community.

Recent studies of young schoolchildren show a poor level of knowledge concerning health. At the same time, present programmes focus on increasing this knowledge despite the fact that studies have shown that health knowledge alone does not lead to change in health behaviour. Furthermore, surveys show that school health textbooks emphasize knowledge of infectious disease, immunization and cleanliness, with little or no emphasis on psychosocial issues and the new problems of these children. The Working Group recommended that the content of primary school health education programmes be updated to give emphasis to psychosocial subjects such as life and death, and problems such as overnutrition. The participants also agreed that five to nine years of age was not too early to begin to present the biological facts about sex and to answer questions in this subject area honestly and forthrightly.

It was also recommended that the methodology of primary school health education programmes be updated. Since neither health nor the acquisition of knowledge are incentives for the children, health education programmes must be challenging and should be made enjoyable. The health education can be flexible, fitting into the rest of the school's curriculum wherever appropriate. The learning can take place through "action programmes" in which the children become actively involved in solving a health problem in their school or community (see section 3.2.2 for a specific example involving the problem of traffic accidents). Health education programmes, by involving older children, parents and other adults, can take advantage of the fact that children this age learn through behaviour modelling.

The Working Group recommended the strengthening of health education of primary school teachers. Here also the content and methodology need to be updated and emphasis needs to be placed on new problems and action programmes. When teaching health subjects, the teacher should be assisted by a team which includes school health personnel, school psychologists, parents and other community members. The preparation of school health education materials should be a cooperative effort on the part of health personnel, teachers, engineers, architects, natural scientists and media professionals. The preparation of teachers for health education was the subject of a WHO technical report in 1960.[1]

One last recommended solution regarding the health education of young schoolchildren was that health education programmes in the school should be linked to health education programmes in the community. One of the most effective techniques of health education is to involve an entire community, including the schools, in solving its own health problems. Such a community health action programme can involve mass media, school groups, adult organizations, etc. in a meaningful goal-directed activity and can significantly change the health behaviour in an area and can bring the community into closer collaboration with the schools. Such collaborative health projects are compatible with recent advances in health education, which suggest that one of the most effective ways of influencing the health of a community is to influence the economy and industry of the community (including the availability of healthy goods). The school-community projects are also compatible with the technique whereby, rather than telling people what they must or must not do, they are provided with all the available data on a given health problem and encouraged to choose, both individually and as a group, what they want as health goals and how to achieve them: a new health education approach and one that has proved to be effective.

---

[1] World Health Organization (1960) Teacher preparation for health education. Report of a joint WHO/UNESCO expert committee, Geneva (Wld Hlth Org. techn. Rep. Ser., No. 193)

4.5 Future solutions

In reviewing the overall organization of health services for children five to nine years of age in the European Region, the Working Group recognized that a number of different delivery systems exist. In many of these systems, however, a common element is the dichotomy between preventive and curative services. Such a dichotomy makes family-centred, comprehensive health services for these children most difficult to achieve. There are a variety of possible solutions to this problem, but the Working Group recommended that such solutions should, in all cases, be towards establishing the principle of integration: integration of school and community and integration of health, education and social services. The integration of the school with the community is, of course, part of the larger integration of education and social services and has been achieved only in a few places in the Region. The successfully integrated systems can serve as models for replication.

In reviewing the recommended solutions for organizing health services in the schools, one finds the same important principle of integration of the school health services with other school services. The recommendation is for a de-emphasis of the traditional, rather isolated activities of the school physician and school nurse which focused on the status of physical health, and to emphasize a team effort in the school which has the variety of competencies required to cope with the psychosocial complexities of the new problems. Each member of the school team (physician, nurse, teacher, psychologist, social worker) has a unique role to play in achieving this.

All of this requires completely new roles for the school health personnel. In the past, the school physician mainly functioned as a practising primary care doctor, with the accent on preventive clinical activities. The school nurse functioned all too often as someone who gives first aid and keeps health records in order. The new roles would be identical to those of any other medical or nursing specialist, as persons with recognized expertise in a unique area of health care. Furthermore, the activities of the new school health physician specialist and school health nurse specialist would be identical to those of other specialists, consisting of consultation and research. In earlier sections we saw how with every one of the new problems of young schoolchildren discussed, the school health personnel have a key role as consultants in the school and community. The physicians and nurses' intimate knowledge of the school milieu combined with their detailed knowledge of the many broad aspects of health of young schoolchildren - school entry, the school placement of chronically ill children, the limitations on physical activity for sports and recreation by age, size and sex, the special problems of disadvantaged children, etc. make them uniquely suited to act as specialist consultants. In earlier sections we also saw that school health personnel are ideally suited to conduct important research. This can consist of basic research, by increasing our knowledge about the morbidity of young schoolchildren (non-fatal accidents, infectious diseases, pattern of school absenteeism, etc.) and also action research, creating new systems of care for these children

and measuring the results. Physicians and nurses who wish to become such school health specialists would need to increase their theoretical knowledge systematically in many areas, including the social and behavioural sciences and paedagogy and to increase their practical knowledge through observation in school classrooms, school eating places, school sports, neighbourhood playgrounds, etc. But the reward for such effort would be great: the new expertise and new activities would be recognized by their own peers outside of the school as well as other professionals in and out of school as a unique and important contribution to the community. As the status of the school health personnel increases, so too would the status of the school health programme and this, in turn, would increase the possibilities for and ease of information exchange and integration of services.

5. CONCLUSIONS AND RECOMMENDATIONS

The final recommendations resulted from a careful evaluation of the present problems of children 5-9 years of age. Consequently the reader is cautioned that these recommendations gain meaning and significance only if account is taken of the main body of this report, which incorporates complementary, and more detailed recommendations by the Working Group.

The participants concluded by unanimously agreeing to the following points:

(1) There is insufficient knowledge of the problems of children between five and nine years old, and more problem-orientated research is needed. The characteristics of the children have changed and more information is needed on their present-day characteristics. Their problems have also changed: old problems have decreased and new problems have arisen. Little is known about these new problems and more information is badly needed. School health personnel are in a unique position to help contribute to this increased knowledge.

(2) Not enough is known about the services for children aged between five and nine years and more research is needed on services and their results. The World Health Organization European Office has led the way in this area and now professionals, including school health personnel, at the local, regional and national levels need to join this effort.

(3) However, enough is known today about the problems and solutions for children aged between five and nine years to change present services now while waiting for the research results. The planning for these changes in services should be problem-oriented

and should include built-in evaluative elements. The changes in services should be directed towards integration: integration of the school with the community; integration of health, education and social services; integration of school health services with other school services. Such integration will require increasing team effort and new roles for those providing services to the children.

ANNEX I

PROGRAMME

Monday, 24 November	
09.00 - 09.30	Registration
09.30 - 09.45	Opening session
09.45 - 10.00	WHO's recent activities (Dr P.S. Rönisch)
	A. Review of the situation in the school age-group 5-9 years
10.30 - 11.00	Background review (Dr M. Wagner)
11.00 - 11.30	Some aspects of the European situation in school health statistics in the school age-group 5-9 years (Dr J.-C. Vuille)
11.30 - 13.00	General discussions (definitions, etc.)
	B. Health protection and promotion
14.00 - 15.30	1. General outline (Dr Helen Zealley)
Tuesday, 25 November	
09.00 - 10.30	2. The role of nutrition (Dr M. Wagner)
11.00 - 12.30	3. The present role of infectious diseases (Dr O. Valtueña)
14.00 - 15.30	4. Accidents in childhood as a public health problem (Professor P.O. Petersson)
Wednesday, 26 November	
	C. The child in its milieu
09.00 - 10.30	1. General outlook on problems of in-schooling and school health (Dr Geneviève Congy)
11.00 - 12.30	2. Urbanization and the problems of children of school age 5-9 years (Mr B. Goodey)
14.00 - 15.00	3. Some aspects of health surveillance for children (Dr V. Tatočenko)

15.30 - 16.45	4. The psychological relation between school, family and child - Health protection and measures for improving health (Professor G. Glombek)

Thursday, 27 November

	D. Children needing special attention
09.00 - 10.30	1. Psychological problems of children living under non-optimal social conditions (Dr M. Borrelli)
11.00 - 12.30	2. General outlook on some social and socioeconomic factors (Dr A. de Vries)
14.00 - 15.00	3. Problems of children handicapped by chronic diseases (Professor Barbara Kańska)
15.30 - 16.30	4. Problems of (slightly) mentally retarded children (Mr S. Asheim)

Friday, 28 November

09.00 - 12.30	E. General services (Dr J.-C. Vuille)
13.30 - 14.30	Conclusions and recommendations
14.30 - 15.00	Closing session

ANNEX II

LIST OF PARTICIPANTS

TEMPORARY ADVISERS

Mr S. Asheim
Chief Psychologist, District Office for Educational Psychology, Haugesund, Norway

Dr M. Borrelli
President, Materdei Community Centre, Naples, Italy

Professor G. Brilla
Aachen Pedagogic High School, Aachen, Federal Republic of Germany

Dr Geneviève Congy (Vice-Chairman)
Chief, External Relations, International Children's Centre, Paris, France

Mr B. Goodey
Senior Lecturer in Urban Analysis and Perception, Urban Design Department of Town Planning, Oxford Polytechnic, Headington, Oxford, United Kingdom

Professor Barbara Kańska
Director, Institute of Paediatrics, Medical Academy in Cracow, Cracow, Poland

Professor P.O. Petersson
Department of Paediatrics, University Hospital, Uppsala, Sweden

Dr V. Tatočenko (Chairman)
Senior Research Officer, Institute of Paediatrics, Academy of Medical Sciences of the USSR, Moscow, USSR

Dr O. Valtueña
General Inspector, School Health Services, Ministry of Education and Science, Madrid, Spain

Dr A.K. de Vries
Scientific Project Leader, State University of Utrecht, Utrecht, Netherlands

Dr J.-C. Vuille
Deputy Director, Institute for Social and Preventive Medicine, University of Bern, Bern, Switzerland

Dr M.G. Wagner (Rapporteur)
Visiting Professor, Institute of Social Medicine, University of Copenhagen, Denmark

Dr Helen Zealley
Community Medicine Specialist, Lothian Health Board, Edinburgh, Scotland, United Kingdom

WORLD HEALTH ORGANIZATION

Regional Office for Europe

Miss W. Haddad
Officer for Public Health Nursing/Midwifery

Dr M. Postiglione
Chief, Disease Prevention and Control

Dr P.S. Rönisch (Secretary)
Regional Officer for Maternal and Child Health

Dr D. Sokolov
Chief, Strengthening of Health Services

Dr A.P. Woudenberg
Regional Officer for Health Education and Social Sciences

Headquarters

Dr S. Alexaniants
Medical Officer, Maternal and Child Health